UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

BC-2

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/059,765	04/14/1998	SHINICHI HIRATA	SONY-P8407	8893

22850 7590 11/20/2001

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER
SEAL, JAMES

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 11/20/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/059,765	Applicant(s) HIRATA, SHINICHI	
	Examiner James Seal	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

1. The request filed on 27 August 2001 for a Request for Continued examination (RCE) under 35 CFR 132 based on parent Application No. 09059765 is acceptable and a RCE has been established. An action on the RCE follows.

2. Claims 1-12 are pending.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

4. The examiner suggests that two sets of labels under providers – *users* and *devices* would make Figure 1 distinguishable from the prior art and also make it more informative.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-12 are rejected under 35 U. S. C. 103 as being anticipated by Naughton et. al. (US 6020881 A) and further in view of Venkatraman et. al., (US 5,956,487 A) or alternately by Goldberg et. al. Beyond the Web: Excavating the Real

World Via Mosaic (Second International WWW Conference, Chicago, IL. October 17-21, 1994) and Simmons, Contemporary Cryptology: The Science of Information Integrity.

6. Naughton et. al. (US 6020881) and further in view Simmons, Contemporary Cryptology: The Science of Information Integrity.

7. In claim 1, the limitation of sending control commands over a network to a receiving apparatus that extracts (unpacks, Column 28, 45-49) from an electronic messages over a communication network (Email, Column 27, lines 1-3, Figure 1a. Figure 2c) and use these control commands to remotely control a TV or VCR or Microwave oven or Stereo or thermostat including remotely programming the VCR (Column 7 16-20, Figure 1b) at a different location is disclosed by Naughton. Naughton is silent on the whether the network he discloses is the Internet, and use of certification of the user before carrying out the commands.

8. Venkatraman et. al. (US-5, 956, 487 A) discloses the use of the Internet (World-Wide Web Figure 5) to control devices such as home entertainment equipment, televisions, video and audio player and recorders remotely. Alternately, Goldberg et. al. in Beyond the Web: Excavating the Real World Via Mosaic (Second International WWW Conference, Chicago, IL. October 17-21, 1994) teach remote control via the internet. Goldberg et. al., recite the used the Internet to control remotely (teleoperate) a robot used in the excavation of an an archaeological site in which the user at a remote site was able to control the movement of a camera (horizontally and vertical) and allow user to deliver a burst of air to clear the region. One of ordinary skill in the art while recognizing the advantages of replacing the network disclosed by Naughton et. al. with

that of the Internet which would provided a more general platform with which to base remote control of devices using electronic messages.

9. The examiner takes official notice that electronic messaging over a network such as the Internet is not secure against intentional or unintentional tampering (via hacker terrorists and the like). Therefore one of ordinary skill in the art would have been motivated to add some type of verification to Naughton system identify the source of the commands or the identity of the user before carrying out these commands. One of ordinary skill in the art would have consulted standard cryptographic references such as Simmons Contemporary Cryptography to see the best ways of implementing such a verification. Simmons discloses the use of certificates to perform simple identity verification (pages 220-221 and 411-415). Further such certificates would been encrypted and embedded in the electronic message along with the control commands to be extracted at the point of destination to verify the sender. From figure 1c of Naughton, we see that the receiving device has both a communication system with which to communicate over the network, a CPU for extracting both the control commands and the sender's certificate and a storage device to store the commands while the certificate is verified and the device controller with which to operate the appliance when and if verification is achieved. Claim 1 is rejected.

10. As per claim 2, the limitations of an executing means for the control commands stored in memory of the receiving apparatus is disclosed by Naughton/Simmons (elements 404 and 405 Figure 1c). Claim 2 is rejected.

11. As per claim 3, the limitations that the certification information is predetermined text information in an encrypted state is taught by Naughton Simmons in that extrinsic

information (that is predetermined information) may include name, computer password, credit card number, PIN, etc. all of which are predetermined text (page 410). Claim 3, is rejected.

12. As per claim 4, the limitation that the electronic message contains predetermined information encrypted by a secret key own by authorized user and a decrytor for decrypting the electronic mail after it is received using a public key is disclosed by Naughton/Simmons (see page 414- 415). Claim 4 is rejected.

13. As per claim 5, applicant recites a receiving method for implementing the apparatus of claim 1. It therefore contains the same limitations with respect to art as claim 1. Claim 5 is rejected.

14. As per claim 6, applicant recites a transmitting apparatus that compliments the receiving apparatus of claim 1. Naughton/Simmons disclose a communication system with complimentary receiver/transmitter. Claim 6 is rejected.

15. As per claim 7, applicant recites a transmitting method for implementing the apparatus of claim 6. It therefore contains the same limitations with respect to art as claim 6. Claim 7 is rejected.

16. As per claim 8, applicant recites a transmitting/receiving apparatus consisting both sides of the communication system recited in claims 1 and 6. Naughton/Simmons describe a communication system (transmitter/receiver) with the same limitations. Claim 8 is rejected.

17. As per claim 9, applicant recites a methods implementation of claim 8. Claim 9 therefore recites the same limitations with respect to art as claim 8. Claim 9 is rejection.

18. As per claim 10, the limitation that the control commands comprise instructions for controlling a recording device is disclosed by Naughton (Column 7, line 19 and Figure 1a, element 39). Claim 10 is rejected.

19. As per claim 11, the limitations of a terminal, comprising a modem, memory, central processing unit (CPU) for receiving electronic mail, decrypting, extracting, authenticating, and executing control commands is disclosed by Naughton (See Figure 1c elements 401,403,404 and 405)

20. As per claim 12, the limitation of a terminal with a display device using a GUI (graphical user interface) display that send instructions to an input block which adds a encrypted certificate, control commands to operate a electrical device into electronic

mail message and transmit message by means of a modem to the network to electrical device (see Figure 1b). Claim 12 is rejected.

Response to Remarks

21. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of amendments and new ground(s) of rejection.

References Cited But Not Applied

22. In addition to the art disclosed above, the examiner would also like to mention art which pertain but was not applied. The art in connection with remote control of devices via communication links and especially control via encrypted commands has a long history in the art. The following list is given to show a partial history of this art and its application to various devices.

23. The use of remote control using digital logic dates back to N. Tesla (613809) in which he controlled the movements of a boat by radio waves and logic gates.

24. Use of remote control via encrypted communication links is at least as old as the patent issued to Hedy Kiesler Markey (Hedy Lamarr) and George Antheil Secret Communication System in August 1941 (US 2292387 A). This patent is important for a number of reasons. It was the first application of remote control of an electronic device (a steerable torpedo) over an encrypted communication link (so that the control commands are secure) and the first application of spread spectrum communications (to prevent jamming). The Markey et al. patent contains the elements of a user interface,

network (radio network), encryption, and controlled device (torpedo). Even though different technology is used the same ideas are involved.

25. Freadman (US 5,722,041 A) discloses the remote control of a home entertainment center using a remote terminal over a communication link.

26. Matoyama (US 5819110 A), discloses remote control of business machines using Internet encrypted mail messages.

27. Berardinis (1996) discloses the use of the Internet to control house hold appliances with user override. The houses have smart appliances which not only follow a set schedule but may use the Internet to order food and supplies.

28. Ugajin, (US 5652892 A) July 1997, discloses a method of controlling remote power sources (an electrical device) with a check of user ID (authentication) and password control over a network (e.g. Internet) with security.

29. Motoyama (US 5887216 A) March 1999 discloses remote control of electronic devices over the internet for control, diagnoses, and monitoring of these devices. Further Motoyama discloses the use of his system to reprogram such devices according to what the monitoring center deems appropriate. As one of ordinary skill in the art would have recognized that a VCR would represent an example of an electronic device that could be remotely programmed and that such remote changes in the device parameters would constitute a remote reservation function.

30. Patent EP917052 A1 Remotely Controlling Device Over Internet uses a lab top to control devices A ... N remotely from over the Internet (see figure 1).

31. These patents and articles are listed to show an unbroken link in remote control technology leading to the development of remotely controlled devices using the latest network, the Internet.

32. Finally we include Figure 1.1 entitled Who Can Read Your E-mail, from Bruce Schneier, E-Mail Security: How to Keep Your Electronic Message Private suggests the need for both encryption and validation for electronic messages.

Conclusion

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Seal whose telephone number is 703 308 4562. The examiner can normally be reached on M-F, 8-5.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gail Hayes can be reached on 703 305 9711. The fax phone numbers for the organization where this application or proceeding is assigned are 70 746-7239 for regular communications and 703 746-7238 for After Final communications.

35. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 3900.

JWS
Jws
November 14, 2001

GAIL HAYES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100